UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,667	03/10/2006	Taisuke Matsumoto	MAT-8703US	4670

23122   7590   07/25/2007

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ART UNIT	PAPER NUMBER
2109	

MAIL DATE	DELIVERY MODE
07/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/539,667	MATSUMOTO ET AL.
	Examiner	Art Unit	
	Sulaiman Nooristany	2109	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>06/14/2005</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

This Office Action is response to the application filed on 10 March 2006

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by **Shigehashi**. JP. Patent Application Publication No. **JP-2003046539.**

Regarding claim 1, Shigehashi teaches wherein an inter-router adjustment method [router of a static configuration [0002]] comprising:

an information request step of requesting router status information to all router devices belonging to a same sub-network [Two or more paths are to transmit a packet to a target node and a target network, when two or more routers corresponding to two or more of the paths exist on LAN to which the node of a transmitting agency is connected [0003], The router set up as a master router processes the packet which received on behalf of the router of one group defined as one virtual router [0006]];

a step of acquiring the router status information and calculating priorities [(amendment

priority) are the values calculated by carrying out based on the CPU activity ratio [0039]]

deciding a router device that is to become an operating status based on the router

status information so that the plurality of router devices can operate virtually as one

router device [In VRRP, a halo packet is exchanged at fixed spacing between each

router, each router is confirming whether to be a normal condition, and this is called a

health check. Moreover, the priority of a router which transmitted the halo packet is

contained in the halo packet concerned, and each router judges whether it is the active

router (master router) with which router should process a packet by comparing these

priorities and own priorities [0005]]; and

a step of deciding a first router device that is to become an operating status and a

second router device to be in a standby status, according to the priorities [a router with

the highest priority is autonomously set up as an active router, and let other routers be

standby routers (backup router) [0005]].

Regarding claim 2, Shigehashi teaches wherein an inter-router adjustment method

[router of a static configuration [0002]] comprising:

an information request step of requesting router status information to all router devices

belonging to a same sub-network [Two or more paths are to transmit a packet to a

target node and a target network, when two or more routers corresponding to two or

more of the paths exist on LAN to which the node of a transmitting agency is connected

[0003], The router set up as a master router processes the packet which received on

behalf of the router of one group defined as one virtual router [0006]];

a step of acquiring the router status information and calculating priorities for deciding a

router device that is to become an operating status based on the router status

information so that the plurality of router devices can operate virtually as one router

device [In VRRP, a halo packet is exchanged at fixed spacing between each router,

each router is confirming whether to be a normal condition, and this is called a health

check. Moreover, the priority of a router which transmitted the halo packet is contained

in the halo packet concerned, and each router judges whether it is the active router

(master router) with which router should process a packet by comparing these priorities

and own priorities [0005]];

a step of transmitting the priorities calculated for the router devices respectively to the

router devices [(amendment priority) are the values calculated by carrying out based on

the CPU activity ratio [0039], the priority of a router which transmitted the halo packet is

contained in the halo packet concerned, and each router judges whether it is the active

router (master router) with which router should process a packet by comparing these

priorities and own priorities [0005]]; and

a step for a first router device which received the priority to decide whether or not to

become an operating status, depending upon the priority of its own and the priority of a

second router device received from the second router device being in an operating

status [When a master router becomes communication link impossible by the reasons of

a failure etc., other backup routers detect that a master router does not answer a halo

packet, and set the highest router of a priority as the following master router which has the same IP address as a front master router in these backup routers [0006]].

Regarding claims 3 & 20, Shigehashi taught wherein an inter-router adjustment method according to claim 1[See above rejection]. Shigehashi further discloses including a step of adjusting the priorities between the router devices depending upon a significance of the router status information [the relation of PRI(1-1) >PRI (2-1) again as a result of the rise of the CPU activity ratio of a routers [0054]].

Regarding claims 4 & 21, Shigehashi taught wherein an inter-router adjustment method according claim 1 [See above rejection]. Shigehashi further discloses wherein request for the router status information is periodically made based on the information request step [a halo packet is exchanged at fixed spacing between each router, each router is confirming whether to be a normal condition, and this is called a health check [0005]].

Regarding claim 5 & 22, Shigehashi taught wherein an inter-router adjustment method according to claim 1[see above rejection]. Shigehashi further discloses wherein request for the router status information is made according to a request from a communication device including the router devices connected to the same sub-network [a halo packet is exchanged at fixed spacing between each router, each router is confirming whether to

be a normal condition, and this is called a health check [0005]].

Regarding claim 6 & 23, Shigehashi taught wherein an inter-router adjustment method

according to claim 1[See above rejection]. Shigehashi further discloses wherein

calculating the priorities is made when there is a change in the router status information

acquired [(amendment priority) are the values calculated by carrying out based on the

CPU activity ratio [0039], the relation of PRI (1-1) >PRI (2-1) again as a result of the rise

of the CPU activity ratio of a routers [0054]].

Regarding claim 7, Shigehashi taught an inter-router adjustment method according to

claim 1 [See above rejection]. Shigehashi further discloses wherein the router status

information is at least any one of a line status, a processing burden and a battery

remaining capacity of the router device itself [the processing burden of the high router of

a load is dynamically distributed to other routers [0055]].

Regarding claim 8, Shigehashi teaches wherein a router priority calculation device [a

priority is calculated from the CPU activity ratio saved at step S10 [0061]] comprising:

a router information gathering section for gathering router status information of router

devices belonging to a same sub-network [The router set up as a master router

processes the packet which received on behalf of the router of one group defined as

one virtual router [0006]];

a priority calculating section for calculating priorities deciding a router device that is to become an operating status based on the router status information so that a plurality of router devices can operate virtually as one router device [In VRRP, a halo packet is exchanged at fixed spacing between each router, each router is confirming whether to be a normal condition, and this is called a health check. Moreover, the priority of a router which transmitted the halo packet is contained in the halo packet concerned, and each router judges whether it is the active router (master router) with which router should process a packet by comparing these priorities and own priorities [0005]]; and a priority notifying section for notifying the priorities calculated for the router devices respectively to the router devices [(amendment priority) are the values calculated by carrying out based on the CPU activity ratio [0039], the priority of a router which transmitted the halo packet is contained in the halo packet concerned, and each router judges whether it is the active router (master router) with which router should process a packet by comparing these priorities and own priorities [0005]].

Regarding claim 9, Shigehashi teaches wherein a router priority calculation device [a priority is calculated from the CPU activity ratio saved at step S10 [0061]] comprising: a router information gathering section for gathering router status information of the router devices belonging to a same sub-network [The router set up as a master router processes the packet which received on behalf of the router of one group defined as one virtual router [0006]]; a priority calculating section for calculating priorities deciding a router device that is to

become an operating status based on the router status information so that a plurality of router devices can operate virtually as one router device [In VRRP, a halo packet is exchanged at fixed spacing between each router, each router is confirming whether to be a normal condition, and this is called a health check. Moreover, the priority of a router which transmitted the halo packet is contained in the halo packet concerned, and each router judges whether it is the active router (master router) with which router should process a packet by comparing these priorities and own priorities [0005]];

a master deciding section for deciding a first router device that is to become an operating status and a second router device that is to be in a standby status according to the priorities and a master notifying section for notifying information identifying the decided router device to the router device [a router with the highest priority is autonomously set up as an active router, and let other routers be standby routers (backup router) [0005]].

Regarding claim 10 & 25, Shigehashi taught a router priority calculation device according to claim 8 [See above rejection]. Shigehashi further disclosses wherein the router information gathering section has a comparing section for comparing the router status information newly acquired with existing router status information, to instruct the priority calculating section to re-calculate a priority when the comparing section detects, a difference in the router status information [each router judges whether it is the active router with which which router should process a packet by comparing these priorities and own priorities, and a router with the highest priority is autonomously set up as an

active router, and let other routers be standby routers [0005], other backup routers

detect that a master router does not answer a halo packet, and set the highest router of

a priority as the following master router which has the same IP address as a front

master router in these backup routers [0006], A priority comparison means to control to

perform junction processing of received data when the own priority is larger than the

priority of other network repeating installation [0020]].

Regarding claims 11 & 26, Shigehashi teaches a router priority calculation device

according to claim 8 [See above rejection]. Shigehashi further discloses wherein the

router information gathering section has an information request section for requesting

the router status information to the router device [The router set up as a master router

processes the packet which received on behalf of the router of one group defined as

one virtual router [0006], Fig. 2, expresses the flow of the process in which it is started

when one certain router receives a halo packet from other routers [0057]].

Regarding claim 12 & 27, Shigehashi taught a router priority calculation device

according to claim 11[see above rejection]. Shigehashi further discloses wherein the

router information gathering section has a timer [fixed time amount T which measures a

CPU activity ratio can be set to some extent as a long time for 2 seconds, 5 etc.

seconds, etc [0047], the information request section requesting the router status

information when receiving a time-up notification from the timer [The timing which

compares a priority between routers has the desirable timing (usually 1-second spacing)

which receives a halo packet in VRRP [0045]].

Regarding claim 13 & 28, Shigehashi taught a router priority calculation device

according to claim 11[See above rejection]. Shigehashi further discloses wherein the

router information gathering section further includes an update request receiving section

for receiving an update request for the priority from a communication device including

the router devices connected to the same sub-network [(amendment priority) are the

values calculated by carrying out based on the CPU activity ratio [0039],

the update request receiving section, when receiving the update request, making a

notification to the information request section whereby the information request section

requests the router status information to the router device [When a master router

becomes communication link impossible by the reasons of a failure etc., other backup

routers detect that a master router does not answer a halo packet, and set the highest

router of a priority as the following master router which has the same IP address as a

front master router in these backup routers [0006]].

Regarding claim 14, 24 & 29, Shigehashi taught a router priority calculation device

according to claim 8 [See rejection above], Shigehashi further discloses wherein the

router status information is at least any one of a line status, a processing burden and a

battery remaining capacity of the router device itself [the processing burden of the high

router of a load is dynamically distributed to other routers [0055]].

Regarding claim 15 & 19, Shigehashi teaches wherein a local network system [LAN]

comprising a router device [router] that is comprised with a status notifying section for

forwarding router status information comprising at least any one of a line status, a

process burden and a battery remaining capacity [the processing burden of the high

router of a load is dynamically distributed to other routers [0055]];

a priority receiving section for receiving a priority deciding a router device that is to

become an operating status so that a plurality of router devices belonging to a same

sub-network can operate virtually as one router device [In VRRP, a halo packet is

exchanged at fixed spacing between each router, each router is confirming whether to

be a normal condition, and this is called a health check. Moreover, the priority of a

router which transmitted the halo packet is contained in the halo packet concerned, and

each router judges whether it is the active router with which router should process a

packet by comparing these priorities and own priorities [0005]]; and

a master deciding section for deciding whether to become an operating status or a

standby status, according to the priority received and a priority notified from a first router

device in an operating status [a router with the highest priority is autonomously set up

as an active router, and let other routers be standby routers (backup router) [0005]], and

a router priority calculation device that is comprised with a router information gathering

section for gathering router status information of router devices belonging to a same

sub-network [The router set up as a master router processes the packet which received

on behalf of the router of one group defined as one virtual router [0006]];

a priority calculating section for calculating priorities deciding a router device that is to

become an operating status based on the router status information so that a plurality of router devices can operate virtually as one router device [In VRRP, a halo packet is exchanged at fixed spacing between each router, each router is confirming whether to be a normal condition, and this is called a health check. Moreover, the priority of a router which transmitted the halo packet is contained in the halo packet concerned, and each router judges whether it is the active router (master router) with which router should process a packet by comparing these priorities and own priorities [0005]]; and a priority notifying section for notifying the priorities calculated for the router devices respectively to the router devices [(amendment priority) are the values calculated by carrying out based on the CPU activity ratio [0039], the priority of a router which transmitted the halo packet is contained in the halo packet concerned, and each router judges whether it is the active router (master router) with which router should process a packet by comparing these priorities and own priorities [0005]].

Regarding claim 16, Shigehashi taught a router device according to claim 15 [see rejection above]. Shigehashi further discloses wherein the status notifying section forwards periodically the router status information onto the sub-network [a halo packet is exchanged at fixed spacing between each router, each router is confirming whether to be a normal condition, and this is called a health check [0005]].

Regarding claim 17, Shigehashi taught a router device according to claim 15 [see above rejection]. Shigehashi further discloses including an information request

receiving section for receiving a request for the router status information [The router set up as a master router processes the packet which received on behalf of the router of one group defined as one virtual router [0006]], to forward the router status information onto the sub-network depending upon the request the status notifying section received the priority of a router which transmitted the halo packet is contained in the halo packet concerned, and each router judges whether it is the active router (master router) with which router should process a packet by comparing these priorities and own priorities [0005]].

Regarding claim 18, Shigehashi taught a router device according to claim 15 [See above rejection], Shigehashi further discloses including a status monitor section for monitoring a change in the router status information [the relation of PRI(1-1) >PRI (2-1) again as a result of the rise of the CPU activity ratio of a routers [0054]], the status monitor section, when detecting a change in the router status information, making a notification to the information notifying section whereby the information notifying section forwards a latest router status information onto the sub-network [(amendment priority) are the values calculated by carrying out based on the CPU activity ratio [0039], When a master router becomes communication link impossible by the reasons of a failure etc., other backup routers detect that a master router does not answer a halo packet, and set the highest router of a priority as the following master router which has the same IP address as a front master router in these backup routers [0006]].

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

> U.S. Patent 6,684,241 to Sandick et al.
>
> U.S. Patent 6,954,436 to Yip et al.
>
> U.S. Patent 7,209,425 to Hara et al.
>
> U.S. Patent App. 2003/0037165 to Shinomiya, Daisuke
>
> U.S. Patent App. 2002/0184387 to Yamaya et al.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sulaiman Nooristany whose telephone number is (571)

270-1929. The examiner can normally be reached on M-F from 9 to 5. If attempts to

reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu,

can be reached on (571) 272-6798. The fax phone number for the organization where

this application or proceeding is assigned is 571-273-8300. Information regarding the

status of an application may be obtained from the Patent Application Information

Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the

PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

Sulaiman Nooristany   7/17/2007

James K. Trujillo
Primary Examiner
TC 2100